

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

WATER RESOURCES ENGINEERING MEMORANDUM NO. 66

TO: Managers and Supervisors DATE: February 15, 2008

FROM: Mark Cowin SUBJECT: DWR Economic Analysis
Deputy Director Guidebook

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Acting Chief Deputy Director

PURPOSE

Water Resources Engineering Memorandum (WREM) No. 66 establishes the status of the Department of Water Resources (DWR) [*Economic Analysis Guidebook*](#) (2008). The guidebook is for internal use of all DWR program and project managers and interdisciplinary matrix team leads and can be found at DWR's Economic Analysis Web Site, www.economics.water.ca.gov.

POLICY

Because of its considerable water management partnerships with the federal government, DWR has a policy that all economic analyses conducted for its programs and projects be fundamentally consistent with the federal *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies* (P&G), which was adopted by the US Water Resources Council on March 10, 1983. The P&G set forth *principles* "...intended to ensure proper and consistent planning by federal agencies in the formulation and evaluation of water and related land resources implementation studies " and *guidelines* that "...establish standards and procedures for use by federal agencies in formulating and evaluating alternative plans for water and related land resources implementation studies." Where its perspective is not strictly federal, the P&G is both conceptually and methodologically appropriate for State analyses.

It is also DWR policy to adopt, maintain, and periodically update its own economic guidebook, which is consistent with the P&G but can also incorporate innovative methods and tools when appropriate. This policy is necessary because (a) the P&G has not been updated for more than 20 years, (b) federal

and State economic analyses sometimes have different regional analysis perspectives, and (c) water management projects and programs have become more complex.

DISCUSSION

Within DWR, economic analysis has many important program applications, including State Water Project (SWP) and non-SWP facilities' feasibility analyses which are often in partnership with federal and local agencies, statewide water planning (*California Water Plan Updates*), environmental and socioeconomic impact analyses, local assistance loan and grant programs, review of other agencies' analyses and reports, and for support for other internal DWR management decisions. To guide these analyses, DWR uses economics reference materials that are outdated or have not been formally adopted (1968 *Economics Manual* and 1977 *Draft Economics Practices Manual*). Updated economics guidance would be extremely helpful with future economic analyses.

DWR adoption of an updated economics guidebook would:

- Make economic analysis more understandable to other specialists, DWR management, and stakeholders.
- Identify emerging non-traditional methods of performing economic analysis, particularly those involving assessment for project benefits not usually assigned monetary values (such as ecosystem restoration).
- Describe the basic economic analysis concepts, methods and tools used in water resource planning and when to use them.
- Provide examples of various types of economic analyses.

The *Economic Analysis Guidebook* does not provide step-by-step instructions for performing economic analysis. However, it references the sources mentioned above for those wishing greater detail on how to perform evaluations (for example, the estimation of urban or agricultural water supply benefits).

The *Economic Analysis Guidebook* is not intended to supplant regulations that may be required by the Office of Administrative Law for specific programs, such as, loan and grant programs administered by DWR. Also, appropriate regulations may have to be developed by program staff for programs that require economic analysis guidance or criteria to be followed by agencies other than DWR. However, it is recommended that newly adopted regulations reference or incorporate this guidebook.

RESPONSIBILITY

The Chief of the Economic Analysis Section (EAS), Division of Planning and Local Assistance (DPLA), is responsible for ensuring, either directly or by delegation to EAS staff, that appropriate practices are used for all economic analyses conducted within DWR, either through direct supervision or review of the work performed by others, including consultants. The Chief is also responsible for updating this WREM and ensuring its content is understood and implemented by DWR program managers. Financial analyses—for example, that are done by the State Water Project Analysis Office (SWPAO) for contractor billing purposes—are not within the scope of this WREM.

Program managers, project managers, and matrix team leads should brief the EAS Chief and staff early in the planning process about the objectives of their studies for which economic analyses or simple economic input is required. The EAS Chief or staff can help make this determination. The EAS Chief or staff will then either provide the economic input or prepare scopes of work presenting the appropriate methods and tools to be used for the economic analysis and its data and time requirements or review scopes of work prepared by others, including consultants, and suggest changes as appropriate. However, the program manager, project manager, or team lead remains ultimately responsible for ensuring that appropriate economics practices are followed.

COORDINATION

Because of the increasing complexity of, and public participation in, water management projects and programs, DWR economists must work closely with other specialists early and often to properly define the problem being analyzed to ensure that appropriate methods and tools are used in the economic analysis. For example, the economist must depend upon others (engineers, land and water use analysts, planners, ecosystem restoration specialists, geologists, etc.) to identify differences in project physical outputs or performance with project conditions, which is critical for the economic analysis.

In addition to working with DWR specialists from other disciplines, the economist must work with specialists from numerous other agencies and organizations on a feasibility study (for example, the US Bureau of Reclamation, the US Army Corps of Engineers, local government agencies, consultants, and stakeholders). Finally, in addition to applying the most appropriate methods and tools, DWR economists must strive to make economic analysis more understandable to other specialists, program managers, management, and stakeholders. The guidebook

contributes to this goal by describing methods and tools used in water resource economic analyses and by providing examples. Further communication and interaction is essential between the economist and other members of interdisciplinary teams to which they may be assigned.

TRAINING

DWR's Training Office should incorporate the *Economic Analysis Guidebook* into several of its courses, including those for supervisor training and management development, because economic analysis is critical to many DWR programs and projects. Specifically, those courses that should incorporate the guidebook are:

- Economic analysis training — Water Economics and Fundamentals of Engineering Economics.
- Supervisor training and management development — Supervisor Training, Executive Development Program, and Management Development Program.

Other economics training needs should be coordinated with the Training Office.

IMPLEMENTATION

This policy will be implemented immediately.

Signature on file with MAO

Signature on file with MAO

Mark Cowin
Deputy Director

Sue Sims
Acting Chief Deputy Director

Date: _____

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